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(71) Applicant (for all designated States except US): **NUEVOLUTION A/S [DK/DK]**; Rønneegade 8,5, DK-2100 Copenhagen (DK).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **PEDERSEN, Henrik** [DK/DK]; Frodesvej 24, DK-2880 Bagsværd (DK). **FRANCH, Thomas** [DK/DK]; Humlebækgade 14, st.tv., DK-2200 Copenhagen N. (DK).

(74) Agent: **HØIBERG A/S**; Store Kongensgade 59 A, DK-1264 Copenhagen K. (DK).

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(54) Title: ENCODED MOLECULES BY TRANSLATION (EMT)

(57) Abstract: The present invention is directed to methods for the synthesis, selection, amplification and isolation of templated molecules having desirable properties. The invention makes it possible to synthesise a variety of different templated molecules other than  $\alpha$ -peptides and modified  $\alpha$ -peptides. In particular, the present invention enables synthesis of templated molecules such as  $\beta$ -,  $\gamma$ -,  $\omega$  peptides, carbopeptoids, vinylogous peptides, oligoanhydrides, oligoureas, azapeptides (azatides), oligocarbamates, PNA, oligopyrrolinones, vinylogous sulfonamidopeptide, peptoids, azapeptides and hydrazino peptides. It is possible in accordance with the methods of the invention to synthesise templated molecules comprising heterocyclic components, such as coumarins and quinolones, pyrazolone, isoxazolone, pyrimidiones, pthalhydrazides, diketopiperazines, hydantoins, and benzodiazepines.